

Translated English of Chinese Standard: GB/T32796-2016

www.ChineseStandard.net

Sales@ChineseStandard.net

GB

NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

ICS 77.140.50
H 46

GB/T 32796-2016

Cold rolling ferritic stainless steel sheet and strip for automotive exhaust system

汽车排气系统用冷轧铁素体不锈钢钢板和钢带

GB/T 32796-2016 How to BUY & immediately GET a full-copy of this standard?

1. www.ChineseStandard.net;
2. Search --> Add to Cart --> Checkout (3-steps);
3. No action is required - Full-copy of this standard will be automatically & immediately delivered to your EMAIL address in 0~25 minutes.
4. Support: Sales@ChineseStandard.net. Wayne, Sales manager

Issued on: August 29, 2016

Implemented on: July 01, 2017

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine;**

Standardization Administration of PRC.

Table of contents

Foreword.....	3
1 Scope	4
2 Normative references	4
3 Classification and code	7
4 Order content	7
5 Size, shape, weight and allowable deviation	8
6 Technical requirements	12
7 Test methods.....	15
8 Inspection rules	16
9 Packing, marking and quality certificate	17
Appendix A (Informative) Operating temperature and recommended designations of different components for automobile exhaust system	18
APPENDIX B (Informative) Ferritic stainless steel sheets and strips - Basic physical properties	19

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard was proposed by the China Iron and Steel Association.

The standard shall be under the jurisdiction of the National Steel Standardization Technical Committee (SAC/TC 183).

The main drafting organizations of this standard: Baosteel Stainless Steel Co., Ltd., Metallurgical Industry Information Standards Research Institute, Ningbo Baoxin Stainless Steel Co. Ltd.

The main drafters of this standard: Xu Zhongjie, Bi Hongyun, Zhang Weixu, Ke Keli, Li Xin, Dong Li, Zhu Yiyong, He Pan.

Guidelines for recoverable material selection of electrical and electronic products

1 Scope

This standard specifies the classification, code, order content, size, shape, mass and allowable deviation, technical requirements, test methods, inspection rules, packaging, marking and quality certificate of cold rolling ferritic stainless steel sheet and strip for automotive exhaust system.

This standard applies to the cold rolling ferritic stainless steel wide strip AND its sheared sheet and longitudinally cut wide stripe with a thickness of 0.4 mm ~ 3.0 mm (abbreviated as steel sheet and strip) for automotive exhaust system.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this Standard.

GB/T 222 Permissible tolerances for chemical composition of steel products

GB/T 223.3 Methods for chemical analysis of iron, steel and alloy - The diantipyrylmethane phosphomolybdate gravimetric method for the determination of phosphorus content

GB/T 223.4 Alloyed steel - Determination of manganese content - Potentiometric or visual titration method

GB/T 223.5 Method for chemical analysis of iron, steel and alloy - The reduced molybdosilicate spectrophotometric method for the determination of acid-soluble silicon content

GB/T 223.11 Iron, steel and alloy - Determination of chromium content - Visible titration or potentiometric titration method

GB/T 223.16 Methods for chemical analysis of iron, steel and alloy - The chromotropic acid photometric method for the determination of titanium content

GB/T 223.18 Methods for chemical analysis of iron, steel and alloy - The sodium thiosulfate separation iodometric method for the determination of copper content

GB/T 223.19 Methods for chemical analysis of iron, steel and alloy - The NHCM-trichloromethane extraction spectrophotometry for the determination of copper content

GB/T 223.23 Iron, steel and alloy - Determination of nickel content - The dimethylglyoxime spectrophotometric method

GB/T 223.25 Methods for chemical analysis of iron, steel and alloy - The dimethylglyoxime gravimetric method for the determination of nickel content

GB/T 223.26 Iron, steel and alloy - Determination of molybdenum content - The thiocyanate spectrophotometric method

GB/T 223.28 Methods for chemical analysis of iron, steel and alloy - The alpha-benzoinoxime gravimetric method for the determination of molybdenum content

GB/T 223.36 Method for chemical analysis of iron, steel and alloy – The neutral titration method for the determination of nitrogen content after distillation separation

GB/T 223.40 Iron, steel and alloy - Determination of niobium content by the Chlorosulfonol S spectrophotometric method

GB/T 223.53 Methods for chemical analysis of iron, steel and alloy - The flame atomic absorption spectrophotometric method for the determination of copper content

GB/T 223.58 Methods for chemical analysis of iron, steel and alloy - The sodium arsenite-sodium nitrite titration method for the determination of manganese content

GB/T 223.60 Methods for chemical analysis of iron, steel and alloy - The perchloric acid dehydration gravimetric method for the determination of silicon content

GB/T 223.61 Methods for chemical analysis of iron, steel and alloy - The ammonium phosphomolybdate volumetric method for the determination of phosphorus content

GB/T 223.68 Methods for chemical analysis of iron, steel and alloy - The potassium iodate titration method after combustion in the pipe furnace for the determination of sulfur content

GB/T 223.69 Iron, steel and alloy - Determination of carbon - Gas-volumetric method after combustion in pipe furnaces

GB/T 228.1-2010 Metallic materials - Tensile testing - Part 1: Method of test at room temperature

GB/T 230.1 Metallic materials - Rockwell hardness test - Part 1: Test methods (scales A, B, C, D, E, F, G, H, K, N, T)

GB/T 231.1 Metallic materials - Brinell hardness test - Part 1: Test methods

GB/T 232 Metallic materials - Bend test

GB/T 247 General rules of acceptance, package, mark and certification for steel sheets and strips

GB/T 708-2016 Dimensions, shape, weight and tolerance for cold-rolled steel plate

GB/T 2975 Steel and steel products - Location and preparation of test pieces for mechanical testing

GB/T 3280 Cold rolled stainless steel plate, sheet and strip

GB/T 4340.1 Metallic materials - Vickers hardness test - Part 1: Test method

GB/T 8170 Rules for rounding off for numerical values & expression and judgment of limiting values

GB/T 11170 Stainless steel - Determination of multi-element contents - Spark discharge atomic emission spectrometric method (Routine method)

GB/T 14203 General rules for spark discharge atomic emission spectrometry

GB/T 17505 Steel and steel products - General technical requirements for delivery

GB/T 20066 Steel and iron - Sampling and preparation of samples for the determination of chemical composition

GB/T 20123 Steel and iron - Determination of total carbon and sulfur content - Infrared absorption method after combustion in an induction furnace (Routine method)

rolling marks, or color difference the depth of which is less than half of the thickness tolerance.

6.6.2.3 The edge of the steel strip shall be flat. It is not allowed for the edge cutting steel strip edge to have irregular cutting the depth of which is more than half of the width tolerance OR the burrs more than the thickness tolerance of the steel strips; AND it is not allowed for the edge uncut steel strips to have edge crack which is more than width tolerance.

6.7 Special requirements

As required by the buyer, it may make special requirements for the steel chemical composition, mechanical properties, plastic strain rate (r value), tensile strain hardening index (n value), non-metallic inclusions, corrosion resistance (intergranular corrosion and cyclic corrosion), high-temperature fatigue mechanical properties, and anti-oxidation properties, AND the specific contents shall be determined by the supplier and the buyer through negotiation.

7 Test methods

7.1 Test methods for chemical composition

The steel chemical composition shall comply with the provisions of GB/T 223.3, GB/T 223.4, GB/T 223.5, GB/T 223.11, GB/T 223.16, GB/T 223.18, GB/T 223.19, GB/T 223.23, GB/T 223.25, GB/T 223.26, 223.28, GB/T 223.38, GB/T 223.40, GB/T 223.53, GB/T 223.58, GB/T 223.60, GB/T 223.61, GB/T 223.68, GB/T 223.69, GB/T 11170, GB/T 14203, GB/T 20123, GB/T 20124 and GB/T 20125.

7.2 Inspection items, sampling quantity, sampling methods and location, and test methods of steel sheets and strips

The inspection items, sampling quantity, sampling methods and location, and test methods of each batch of steel sheets and strips shall comply with the provisions of Table 12.

Table 12 Test items, sampling quantity, sampling methods and location and test methods

No.	Inspection items	Sampling quantity	Sampling method and location	Test methods
1	Chemical composition	1 per furnace	GB/T 20066	7.1
2	Tensile test	1 per batch	GB/T 2975	GB/T 228.1-2010
3	Hardness	1 per batch		GB/T 230.1, GB/T 231.1, GB/T 4340.1

This is an excerpt of the PDF (Some pages are marked off intentionally)

Full-copy PDF can be purchased from 1 of 3 websites:

1. <https://www.ChineseStandard.us>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Select your country (currency), for example: USA (USD); Germany (Euro).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Tax invoice can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with download links).

2. <https://www.ChineseStandard.net>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Add to cart. Only accept USD (other currencies - <https://www.ChineseStandard.us>).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with PDFs attached, invoice and download links).

3. <https://www.google.com/search?tbm=bks&q=ChineseStandard.net>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Google Books -- Select your currency.
- Processed by Google (delivery, tax invoice etc.). Delivered in 9 seconds by Google.
- Tips: Download an unprotected **True-PDF** (text-editable) from Google-Books:
 1. <https://play.google.com/books> → 2. Sign in → Google account
 3. Find the **BOOK** you bought → 4. Click "3-dots" → Export
 5. Save as "*.pdf" (Save True-PDF to your local computer for offline reading/printing)

Translated by: Field Test Asia Pte. Ltd. (Incorporated & taxed in Singapore. Tax ID: 201302277C)

Accountable person and shareholder: Wayne Zheng

About Us (Goodwill, Policies, Fair Trading...): <https://www.chinesestandard.net/AboutUs.aspx>

Contact: Wayne Zheng, Sales@ChineseStandard.net

Linkin: <https://www.linkedin.com/in/waynezhengwenrui/>

----- The End -----